

# Parth Patekar

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## EDUCATION

### INDIAN INSTITUTE OF TECHNOLOGY (ISM), DHANBAD

*Integrated M.Tech. in Mathematics and Computing*

Thesis (University of Manitoba): Limb-O: Real-Time Comparison and Visualisation of Lower Limb Motions

Dhanbad, India  
July 2015 - June 2020

## EXPERIENCE

### UNIVERSITY OF MANITOBA, HUMAN-COMPUTER INTERACTION LAB

*Research Assistant*

- Developed novel TV-based hand gesture interaction technique for **Huawei: Human-Machine Interaction Lab**
- Developed a remote physiotherapy system which mirrors limb motions onto 3D human avatar in real-time in immersive-VR.
- Applied for a patent.

Winnipeg, MB, Canada  
Jan 2020 - Present

### SAMSUNG R&D INSTITUTE

*Research Engineer Intern, Gaming and Advanced Graphics*

- Developed AR-doodle feature of **Samsung Galaxy Note 10**.
- Outperformed industry best in terms of smoothness and visual features.
- Extruded a 3D tubular-mesh from user generated touch-points and applied material effects on it.

Bangalore, KA, India  
May 2019 - July 2019

### INDIAN INSTITUTE OF TECHNOLOGY (ISM)

*Teaching Assistant, Design and Analysis of Algorithms*

- Teaching Assistant for Design and Analysis of Algorithms course.

Dhanbad, JH, India  
Aug 2018 - Dec 2018, Aug 2019 - Dec 2019

### KIRLOSKAR OIL ENGINES PVT LTD

*Software Engineer Intern*

- Developed front-end and back-end of a Cost-reducing Warehouse Management System.
- Reduced total cost by upto 12%.
- Optimized cost of transportation of engine spare-parts and oil barrels across different warehouses.

Rajkot, GJ, India  
May 2017 - July 2017

## PUBLICATIONS

• Michael Gammon, Ritesh Udhani, **Parth Patekar**, Yumiko Sakamoto, Carlo Menon, and Pourang Irani. 2020. **Limb-O: real-time comparison and visualization of lower limb motions**. In Proceedings of the 11th Augmented Human International Conference (AH '20). ACM, New York, NY, USA, Article 5, 1–8. [[Paper](#)]

• Aman Sinha, **Parth Patekar**, and Radhika Mamidi. 2019. **Unsupervised Approach for Monitoring Satire on Social Media**. In Proceedings of the 11th Forum for Information Retrieval Evaluation (FIRE '19). ACM, New York, NY, USA, 36–41. [[Paper](#)]

## PROJECTS

- **Cryptosystem**: Developed an integral transform-based cryptosystem for secure transmission of images across an insecure network using **Python, CUDA**.
- **Detection and Classification of Traffic Sign**: Developed a deep learning-based system to detect and classify traffic signs images at ATKINS Global Nation-wide Hackathon.
- **Face recognition pipeline**: Developed deep learning-based system to recognize faces for Kaggle Hackathon.

## SKILLS

- **Languages/Technologies**: Primary: C, C++ | Secondary: Python, Java, C#, PHP, JavaScript, SQL
- **Frameworks/Packages/APIs**: TensorFlow, Keras, CUDA, Android, Unity, Laravel, MATLAB, ARCore, OpenGL, git

## KEY COURSES

- **Computer Science**: OOP, Data Structures, Algorithms, Graphics, GPU Computing, Operating System, DBMS, Soft Computing
- **Mathematics**: Operations Research, Numerical Computation, Linear Algebra, Graph Theory, Topology
- **Online**: Machine Learning, Deep Learning (Stanford University)

## POSITIONS OF RESPONSIBILITY

- Student Coordinator of Placement Team, Career Development Centre, IIT(ISM)
- Centre Incharge and Teacher, FFI, a student run NGO that teaches under privileged children.
- Head Coordinator of Annual Technology Fest, IIT(ISM)

July 2019 - May 2020  
Sept 2016 - Mar 2018  
Sept 2017 - Mar 2018